

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

see form PCT/ISA/220

Date of mailing
(day/month/year) see form PCT/ISA/210 (page 2)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION

See paragraph 2 below

International application No.
PCT/DE2004/001809

International filing date (day/month/year)
08/13/2004

Priority date (day/month/year)
10/27/2003

International Patent Classification (IPC) or both national classification and IPC
GO1C19/56, G01P9/04

Applicant
Robert Bosch GMBH

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/

Authorized officer

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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/DE2004/001809

Box No. II Priority

1. ☒ The following document has not yet been furnished:
- ☒ copy of the earlier application whose priority has been claimed (Rules 43*bis*.1 and 66.7(a)).
 - ☐ translation of the earlier application whose priority has been claimed (Rules 43*bis*.1 and 66.7(b)).
- Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.
2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:
- Hoekswtra, F

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WRITTEN OPINION OF THE
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International application No.
PCT/DE2004/001809

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1 - 10	YES
	Claims		NO
Inventive step (IS)	Claims	1 - 10	YES
	Claims		NO
Industrial applicability (IA)	Claims	1 - 10	YES
	Claims		NO

2. Citations and explanations:

see supplementary page

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WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY
(SUPPLEMENTARY PAGE)

International File No. PCT/DE2004/001809

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following documents:

D1: DE 102 37 411 A (BOSCH GMBH ROBERT) July 24, 2003
(2003-07-24)

D2: DE 101 08 196 A (BOSCH GMBH ROBERT) October 24, 2002
(2002-10-24)

- 1 Document D1 is seen as the most proximate related art in relation to the object of Claim 1. It describes a yaw sensor having all the features of the preamble of this claim (see D1, abstract).
- 2 The object of Claim 1 thus differs from the known yaw rate sensor in that the force effect has at least one frequency which is an integral multiple of the drive element oscillation frequency. The object of this claim is therefore novel.
- 3 However, a problem with the known yaw rate sensor is that the Coriolis element is induced to undesired oscillations that are greater than the measuring signal to be analyzed caused by the Coriolis acceleration. The object to be achieved by the present invention can thus be seen as eliminating this problem.

- 4 Although the problem doubtless occurs in D1, it was not specifically addressed in the publication. D1 therefore contains no indication for solving this problem.
- 5 Publication D2 concerns a comparable yaw rate sensor, however, without the dynamic force effect to eliminate the quadrature signal. As to the coupling spring, it is only mentioned that it must be designed in such a way that non-linearities are minimized (D2, para. [0014]). D2 contains no indication of what must be done if despite everything some non-linearities might remain.
- 6 Neither D1 nor D2 or their combination, nor the general technical knowledge makes the invention obvious. Consequently, the object of Claim 1 is based on an inventive step.
- 7 Claims 2-10 are dependent on Claim 2 and thus also meet the requirements of the PCT with respect to novelty and independent step.